

## ABSTRACT

The present invention provides a method and apparatus for extending a zone routing protocol. The invention is configured to provide a robust scalable framework for routing data in wireless ad-hoc networks when unidirectional links **210** are present. When the  
5 reverse path from a destination node (the tail) of a unidirectional link **210** to the originating node (the head) of the link is beyond a designated length, the invention is configured to revert to an on-demand search mechanism. The on-demand search mechanism recursively attempts to build a path to the destination **206** by recognizing nodes that have a route to the destination.

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